

Realization of the expected proliferation of Unmanned Aircraft System (UAS) operations in the National Airspace System (NAS) depends on the development and validation of performance standards for UAS Detect and Avoid (DAA) Systems. The RTCA Special Committee 228 is charged with leading the development of draft Minimum Operational Performance Standards (MOPS) for UAS DAA Systems. NASA, as a participating member of RTCA SC-228 is committed to supporting the development and validation of draft requirements for DAA surveillance system performance. A recent study conducted using NASA's ACES (Airspace Concept Evaluation System) simulation capability begins to address questions surrounding the development of draft MOPS for DAA surveillance systems. ACES simulations were conducted to study the performance of sensor systems proposed by the SC-228 DAA Surveillance sub-group. Analysis included but was not limited to: 1) number of intruders (both IFR and VFR) detected by all sensors as a function of UAS flight time, 2) number of intruders (both IFR and VFR) detected by radar alone as a function of UAS flight time, and 3) number of VFR intruders detected by all sensors as a function of UAS flight time. The results will be used by SC-228 to inform decisions about the surveillance standards of UAS DAA systems and future requirements development and validation efforts.